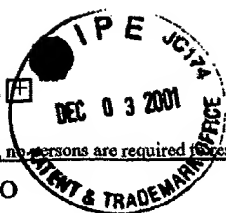


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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known

Application Number	09/940,185
Filing Date	August 27, 2001
First Named Inventor	Gunderson et al.
Group Art Unit	Not Yet Assigned 1634
Examiner Name	Not Yet Assigned Switzer
Attorney Docket Number	A-69605-1/DJB/RMS/DCF

Sheet 1 of 6

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
JS	1	4,200,110		Peterson et al.	4/1980	
	2	4,499,052		Fulwyler	2/1985	
	3	4,682,895		Costello	7/1987	
	4	4,785,814		Kane	11/1988	
	5	4,822,746		Walt	4/1989	
	6	4,824,789		Yafuso et al.	4/1989	
	7	4,999,306		Yafuso et al.	3/1991	
	8	5,002,867		Macevicz	3/1991	
	9	5,028,545		Soini	7/1991	
	10	5,105,305		Betzig et al.	4/1992	
	11	5,114,864		Walt	5/1992	
	12	5,132,242		Cheung	7/1992	
	13	5,143,853		Walt	9/1992	
	14	5,194,300		Cheung	3/1993	
	15	5,244,636		Walt et al.	9/1993	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office ³	Number ⁴	Kind Code ² (if known)				
JS	16	EP	0 269 764	A1	Molecular Biosystems, Inc.	6/1988		
	17	EP	0 392 546	A2	Drmanac et al.	10/1990		
	18	EP	0 478 319	A1	Kabushiki Kaisha Toshiba	4/1992		
	19	EP	0 723 146	A1	SRI International	7/1996		
	20	WO	89/11101	A1	Dynal A.S.	11/1989		
	21	WO	93/02360	A1	Transmed Biotech Incorporated	2/1993		
	22	WO	96/03212	A1	Brenner	2/1996		
	23	WO	97/14028	A2	Luminex Corp.	4/1997		
	24	WO	97/14928	A1	Brint, N.	4/1997		
	25	WO	97/40385	A1	Seul, M.	10/1997		
	26	WO	98/40726	A1	Trustees of Tufts College	9/1998		

Examiner Signature

John Switzer

Date Considered

6/9/03

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Filing Date	August 27, 2001
First Named Inventor	Gunderson et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-69605-1/DJB/RMS/DCF

Sheet 2 of 6

U.S. PATENT DOCUMENTS

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		Number	Kind Code* (if known)			
JS	27	5,244,813		Walt et al.	9/1993	
	28	5,250,264		Walt et al.	10/1993	
	29	5,252,494		Walt	10/1993	
	30	5,254,477		Walt	10/1993	
	31	5,298,741		Walt et al.	3/1994	
	32	5,302,509		Cheeseman	4/1994	
	33	5,320,814		Walt et al.	6/1994	
	34	5,357,590		Auracher	10/1994	
	35	5,380,489		Sutton et al.	1/1995	
	36	5,435,724		Goodman et al.	7/1995	
	37	5,474,895		Ishii et al.	12/1995	
	38	5,481,629		Tabuchi	1/1996	
	39	5,494,798		Gerdt et al.	2/1996	
	40	5,496,997		Pope	3/1996	
	41	5,512,490		Walt et al.	4/1996	
	42	5,516,635		Ekins et al.	5/1996	
JS	43	5,565,324		Still et al.	10/1996	

FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴	Kind Code* (if known)				
JS	44	WO	98/50782	A3	Trustees of Tufts College	11/1998		
JS	45	WO	98/53093	A1	Bioarray Solutions LLC	11/1998		
JS	46	WO	98/53300	A2	Lynx Therapeutics, Inc.	11/1998		
JS	47	WO	99/18434	A1	Trustees of Tufts College	4/1999		
JS	48	WO	99/60170	A1	Hyseq Inc.	11/1999		
JS	49	WO	99/67414	A1	Glaxo Group Ltd.	12/1999		
JS	50	WO	99/67641	A2	Illumina Inc.	12/1999		
JS	51	WO	00/04372	A1	Univ. of Texas	1/2000		
JS	52	WO	00/13004	A2	Trustees of Tufts College	3/2000		

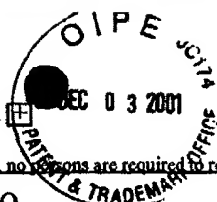
Examiner Signature	<i>Antiet Smith</i>	Date Considered	6/9/03
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		Application Number	09/940,185		
		Filing Date	August 27, 2001		
		First Named Inventor	Gunderson et al.		
		Group Art Unit	Not Yet Assigned		
Examiner Name	Not Yet Assigned				
Sheet	3	of	6	Attorney Docket Number	A-69605-1/DJB/RMS/DCF

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
JS	53	5,573,909		Singer et al.	11/1996	
	54	5,575,849		Honda et al.	11/1996	
	55	5,633,972		Walt et al.	5/1997	
	56	5,639,603		Dower et al.	6/1997	
	57	5,656,241		Seifert et al.	8/1997	
	58	5,690,894		Pinkel et al.	11/1997	
	59	5,814,524		Walt	10/1998	
	60	5,840,256		Demers et al.	11/1998	
	61	5,854,684		Stabile et al.	12/1998	
	62	5,863,708		Zanzucchi et al.	1/1999	
	63	5,888,723		Sutton et al.	3/1999	
	64	5,900,481		Lough et al.	5/1999	
	65	6,023,540		Walt et al.	2/2000	
	66	5,679,524		Nikiforov et al.	10/1997	
	67	5,856,083		Chelsky et al.	01/1999	
	68	5,858,732		Solomon et al.	01/1999	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office ³	Number ⁴	Kind Code ² (if known)				
JS	69	WO	00/16101	A2	Trustees of Tufts College	3/2000		
	70	WO	00/39587	A1	Illumina Inc.	7/2000		
	71	WO	00/47996	A2	Illumina Inc.	8/2000		
	72	WO	00/48000	A1	Illumina Inc.	9/2000		
	73	WO	00/63437	A2	Illumina Inc.	10/2000		
	74	WO	00/71243	A1	Illumina Inc.	11/2000		
	75	WO	00/71995	A2	Illumina Inc.	11/2000		
JS	76	WO	00/75373	A2	Illumina Inc.	12/2000		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known

Application Number	09/940,185
Filing Date	August 27, 2001
First Named Inventor	Gunderson et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-69605-1/DJB/RMS/DCF

Sheet 4 of 6

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
JS	77	6,013,456		Akgavan-Tafti	01/2000	
	78	6,051,380		Sosnowski et al.	04/2000	
	79	6,110,678		Weisburg et al.	08/2000	
	80	6,172,218	B1	Brenner	01/2001	
	81	6,083,763		Balch	07/2000	
	82	5,494,810		Barany et al.	02/1996	
	83	5,830,711		Barany et al.	11/1998	
	84	6,027,889		Barany et al.	02/2000	
	85	6,054,564		Barany et al.	0/2000	
	86	6,251,639	B1	Kurn	06/2001	
	87	6,268,148	B1	Barany et al.	07/2001	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Office ³	Number ⁴	Kind Code ² (if known)				
JS	88	WO	98/13523	A1	Pyrose Quencing AB	04/1998		
	89	WO	93/25563	A1	City of Hope	12/1993		
	90	WO	97/31256	A2	Cornell Research Foundation	08/1997		
	91	WO	00/58516	A2	Whitehead Institute for Biomedical Research	10/2000		
	92	WO	00/71992	A1	Illumina Inc.	11/2000		

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Date Considered

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known

Application Number	09/940,185
Filing Date	August 27, 2001
First Named Inventor	Gunderson et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-69605-1/DJB/RMS/DCF

Sheet 5 of 6

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS


Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
J	93	Abel et al., "Fiber-Optic Evanescent Wave Biosensor for the Detection of Oligonucleotides," Anal. Chem. 68:2905-2912 (1996).	
	94	Anonymous, "Microsphere Selection Guide," Bandg Laboratories, (Fisher, In) September 1998.	
	95	Anonymous, "Fluorescent Microspheres," Tech. Note 19, Bang Laboratories, (Fishers, In) February 1997.	
	96	Bangs, L.B., "Immunological Applications of Microspheres," The Latex Course, Bangs Laboratories (Carmel, IN) April 1996.	
	97	Barnard et al., "A Fibre-Optic Chemical Sensor with Discrete Sensing Sites," Nature, 353:338-340 (September 1991).	
	98	Chen et al., "A Microsphere-Based Assay for Multiplexed Single Nucleotide Polymorphism Analysis Using Single Base Chain Extension," Genome Research, 10(4):549-557 (2000).	
	99	Czarnik, "Illuminating the SNP Genomic Code," Modern Drug Discovery, 1(2): 49-55 (1998).	
	100	Drmanac, R. et al., "Sequencing by Oligonucleotide Hybridization: A Promising Framework in Decoding of the Genome Program," The First International Conference on Electrophoresis, Supercomputing and the Human Genome, Proceeding os th April 10-13, 1990 Conference at Florida State University. Ed. C. Cantor and H. Lim.	
	101	Drmanac, R. et al., "Prospects for a Miniaturized, Simplified and Frugal Human Genome Project," Scientia Yugoslavica, 16(1-2):97-107 (1990).	
	102	Drmanac, R. et al., "Sequencing by Hybridization (SBH) with Oligonucleotide Probes as an Integral Approach for the Analysis of Complex Genomes," International Journal of Genome Research, 1(1):59-79 (1992).	
JBV	103	Drmanac, R. et al., "Sequencing by Hybridization," Automated DNA Sequencing and Analysis, ed. M. Adams, C. Fields and J. Venter. (1994).	
	104	Ferguson et al., "A Fiber-Optic DNA Biosensor Microarray for the Analysis of Gene Expression," Nature Biotechnology, 14:1681-1684 (1996).	
	105	Fuh et al., "Single Fibre Optic Fluorescence pH Probe," Analyst, 112:1159-1163 (1987).	
	106	Healey et al., "Improved Fiber-Optic Chemical Sensor for Penicillin," Anal. Chem. 67(24):4471-4476 (1995).	
	107	Healey et al., "Development of a Penicillin Biosensor Using a Single Optical Imaging Fiber," SPIE Proc. 2388:568-573 (1995).	
	108	Healey et al., "Fiberoptic DNA Sensor Array Capable of Detecting Point Mutations," Analytical Biochemistry, 251:270-279 (1997).	
	109	Hirschfeld et al., "Laser-Fiber-Optic "Optrode" for Real Time In Vivo Blood Carbon Dioxide Level Monitoring," Journal of Lightwave Technology, LT-5(7):1027-1033 (1987).	
	110	Ianhone et al., "Multiplexed Single Nucleotide Polymorphism Genotyping by Oligonucleotide Ligation and Flow Cytometry," Cytometry, 39:131-140 (2000).	

Examiner Signature	<i>J. B. Venter</i>	Date Considered	6/9/03
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Sheet	6	of	6
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